

10/888,985

WHAT IS CLAIMED:

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- 5
1. A purified human nucleic acid comprising SEQ ID NO 6, or the complement thereof.
2. The purified nucleic acid of claim 1, wherein said nucleic acid comprises a region encoding SEQ ID NO 7.
- 10
3. The purified nucleic acid of claim 1, wherein said nucleotide sequence encodes a polypeptide consisting of SEQ ID NO 7.
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4. A purified polypeptide comprising SEQ ID NO 7.
5. The polypeptide of claim 4, wherein said polypeptide consists of SEQ ID NO 7.
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6. An expression vector comprising a nucleotide sequence encoding SEQ ID NO 7, wherein said nucleotide sequence is transcriptionally coupled to an exogenous promoter.
7. The expression vector of claim 6, wherein said nucleotide sequence encodes a polypeptide consisting of SEQ ID NO 7.
8. The expression vector of claim 6, wherein said nucleotide sequence comprises SEQ ID NO 6.
- 25
9. The expression vector of claim 6, wherein said nucleotide sequence consists of SEQ ID NO 6.
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10. A method for screening for a compound able to bind to CENPEv2 comprising the steps of:
- (a) expressing a polypeptide comprising SEQ ID NO 7 from recombinant nucleic acid;
- (b) providing to said polypeptide a test preparation comprising one or more test compounds; and
- III

(c) measuring the ability of said test preparation to bind to said polypeptide.

11. The method of claim 10, wherein said steps (b) and (c) are performed *in vitro*.

12. The method of claim 10, wherein said steps (a), (b), and (c) are performed using a whole cell.

13. The method of claim 10, wherein said polypeptide is expressed from an expression vector.

14. The method of claim 10, wherein said polypeptide consists of SEQ ID

NO 7.

15. A method of screening for compounds able to bind selectively to CENPEv2 comprising the steps of:

(a) providing a CENPEv2 polypeptide comprising SEQ ID NO 7;

(b) providing one or more CENPE isoform polypeptides that are not

CENPEv2;

(c) contacting said CENPEv2 polypeptide and said CENPE isoform polypeptide that is not CENPEv2 with a test preparation comprising one or more compounds; and

(d) determining the binding of said test preparation to said CENPEv2 polypeptide and to said CENPE isoform polypeptide that is not CENPEv2, wherein a test preparation that binds to said CENPEv2 polypeptide, but does not bind to said CENPE polypeptide that is not CENPEv2, contains a compound that selectively binds said CENPEv2 polypeptide.

16. The method of claim 15, wherein said CENPEv2 polypeptide is obtained by expression of said polypeptide from an expression vector comprising a polynucleotide encoding SEQ ID NO 7.

17. The method of claim 16, wherein said polypeptide consists of SEQ ID NO 7.

18. A method for screening for a compound able to bind to or interact with a CENPEv2 protein or a fragment thereof comprising the steps of:

(a) expressing a CENPEv2 polypeptide comprising SEQ ID NO 7 or fragment thereof from a recombinant nucleic acid;

(b) providing to said polypeptide a labeled CENPE ligand that binds to said polypeptide and a test preparation comprising one or more compounds; and

(c) measuring the effect of said test preparation on binding of said labeled CENPE ligand to said polypeptide, wherein a test preparation that alters the binding of said labeled CENPE ligand to said polypeptide contains a compound that binds to or interacts with said polypeptide.

19. The method of claim 18, wherein said steps (b) and (c) are performed *in vitro*.

20. The method of claim 18, wherein said steps (a), (b) and (c) are performed using a whole cell

21. The method of claim 18, wherein said polypeptide is expressed from an expression vector

22. The method of claim 18, wherein said CENPEv2 ligand is a CENPE inhibitor.

23. The method of claim 21, wherein said expression vector comprises SEQ ID NO 6 or a fragment of SEQ ID NO 6.

24. The method of claim 21, wherein said polypeptide comprises SEQ ID NO 7 or a fragment of SEQ ID NO 7.